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BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE

FOREST INSECT INVESTIGATIONS

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TITLE

REPORT OF PINE BEETLE SURVEY on the YAKIMA INDIAN RESERVATION, WASHINGTON Season of 1944

by

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Forest Insect Laboratory
Portland 5, Oregon
November 11, 1944

SUBJECT—

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U. S. Department of Agriculture
Bureau of Entomology and Plant Quarantine
Forest Insect Investigations

REPORT OF PINE BEETLE SURVEY
on the
YAKIMA INDIAN RESERVATION, WASHINGTON
Season of 1944

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November 11, 1944

SUMMARY OF RESULTS

1943 BARK BEETLE INFESTATION (Complete records)

Primary Insect: Western pine beetle in ponderosa pine

Estimated Gross Insect Losses for 1943:

No. of trees	Volume (Board Feet)	Board Feet Per Acre	Percent of Stand
16,000	12,000,000	33	0.4

Trend: Noticeably lower than 1942

Classification: Endemic infestation

1944 BARK BEETLE INFESTATION (Incomplete records)

Primary Insect: Same as in 1943

Probable Trend: Noticeably higher than 1943, probably by 45 percent

Recommendations: No control needed

REPORT OF PINE BEETLE SURVEY

on the

YAKIMA INDIAN RESERVATION, WASHINGTON

Season of 1944

The 1944 survey of forest insect conditions in the ponderosa pine stands of the Yakima Indian Reservation was completed by the writer, with the cooperative assistance of Stanley Johnson during the period from October 3 to 7 inclusive. A 100 percent cruise was again made on six 320-acre check plots and all ponderosa pines killed or windthrown since the 1943 survey were marked and recorded. Although the Smith Springs plot will probably be cutover before next year, it was cruised again and will probably be used to follow the trend of losses after selective cutting.

Losses in 1943.

As evidenced by the check plot data in Table 1, ponderosa pine mortality caused by insects in 1943 was noticeably lower than it was in 1942. All but one plot (Olney Corral) showed marked reductions in 1943, with the losses averaging 35 trees per section, 43 board feet per acre and 0.5 percent of the estimated stand volume. During 1943 more trees were killed on the Logy Creek plot but more volume was lost on both the Smith Springs and Castile Crossing plots.

An estimate of the gross insect-caused losses for the Reservation as a whole in 1943 places the mortality at 16,000 trees and 12,000,000 board feet - the equivalent of 30 trees per section, 33 board feet per acre and 0.4 percent of the stand.

Tentative Losses in 1944.

Approximately 66 percent of the probable losses for the year was evident at the time of the 1944 survey. On this basis, the estimated losses for 1944 appear to be about 45 percent higher than those of 1943 (Table 1) with the trend decidedly upward on all but one plot.

Recommendations.

No control work is necessary at this time and none is recommended.

Table 1. Results of the 1944 survey on the Yakima Indian Reservation - Ponderosa pine timber killed by insects on 320-acre check plots.

Check Plot				1943 Losses					1944 Losses						
					Gross Volume (BM)				Marked in 1944			Estimated Total Losses			
		P. Pine										Gross Volume (BM)			
Name and Location	No.	Acres	Volume MBM	No. Trees	Total	Per Acre	% of Stand	Ratio to 1942	Date of 1944 Cruise	No. Trees	Volume	No. Trees	Total	Per Acre	% of Stand	Ratio to 1943
Trout Creek T7N, R 13E, Sec. 17 W/2	4	320	1,900	22	16,070	50	.8	.38	10/5	6	5,040	10	8,000	25	.4	.50
So. Cedar Valley T6N, R 14E, Sec. 9 W/2	6	320	2,200	7	2,520	8	.1	.22	10/7	6	5,980	10	8,000	25	.4	3.18
Castile Crossing T9N, R 12E, Sec. 13 W/2	12	320	5,200	19	21,040	66	.4	.69	10/5	13	19,760	20	25,000	78	.5	1.19
Logy Creek T7N, R 16E, Sec. 10 W/2	14	320	3,000	32	18,210	57	.6	.29	10/6	36	28,500	55	40,000	125	1.3	2.20
Smith Springs T8N, R 15E, Sec. 2 E/2	15	280	2,000	22	18,470	66	.9	.31	10/3	23	24,290	35	30,000	107	1.5	1.63
Olney Corral T10N, R 14E, Sec. 27 W/2	16	300	2,500	3	3,260	11	.1	1.12	10/4	4	3,100	6	4,000	13	.2	1.23
Total 6 Plots		1850	16,800	105	79,570	43	.5	.40		88	86,670	136	115,000	62	.7	1.45